

REMARKS

Claims 1-32 and 34 are pending in this application, and have been amended to define still more clearly what Applicants regard as their invention. Claims 1, 2, 14, and 15 are independent.

Claims 1-32 and 34 were rejected under 35 U.S.C. § 103(a) as being obvious from Fei et al. (the publication entitled "Turbo-codes Used for Compressed Image Transmission Over Frequency Selective Fading Channel") and U.S. Patent 5,790,131 to Liang et al.

The present invention deals with the compression of digital data, which is then to be coded for transmission error protection. In this context, data representing physical quantities is first compressed into compressed data, which is then subjected to transmission error protection coding.

Claim 1 is directed to a method of adjusting at least one parameter for compression of data representing physical quantities into compressed data, the compressed data then being coded according to a coding mode in order to protect the compressed data from transmission errors. The method includes, as from a required compressed data size, the steps of determining at least one characteristic of the coding mode, determining an effective size of the compressed data according to the required size and the at least one characteristic, and adjusting at least one compression parameter according to the effective size.

One important feature of Claim 1 is that the method determines the effective size of the compressed data (i.e., before transmission error protection coding) based on a required size for the compressed data and on a characteristic of the transmission error

protection coding. The determination of the effective size of the compressed data from the required size is meant to best match the transmission error protection coding to be applied to the compressed data (see, for example, page 3, lines 29-32, of the present specification).^{1/} For instance, an exact match can be found by rounding the desired size to an exact multiple of the length S of the interleaver, when such is used (see, e.g., page 10, lines 1-7).

It is noted that Applicants have amended the present specification herein for the purposes of clarification. Specifically, page 9, lines 21-23, has been amended to state that a regulation interface 40 reads a required total size R_T of the compressed file, and that the required size R_T is for example defined by the user when the user effects the compression control. This change to the specification has been made because the required sized R_T relates to the compressed data, as is clear from other parts of the specification (such as page 2, line 21, and page 10, lines 5-6). This is also clear from the idea to adapt the compressed file, from a required size of compressed data, to an effective size matching with the transmission error protection coding, as explained, for example, at page 2, lines 15-16 and page 3, lines 29-32. In this way, Applicants submit that no new matter has been added to the specification by this amendment.

The Office Action alleges that Fei et al. shows, from a required compressed data size (citing Section V of Fei et al.), the step of determining an effective size of the compressed data according to the required size and a characteristic of the coding mode (citing

^{1/}It is of course to be understood that the references to various portions of the present application are by way of illustration and example only, and that the claims are not limited by the details shown in the portions referred to.

Section VI and Table 2 of Fei et al.). (See page 2 of the Office Action.) Applicants respectfully disagree with this assertion.

First, Applicants fail to understand where Section V of Fei et al. would disclose a “required compressed data size,” as asserted in the Office Action. The “required compressed data size” recited in Claim 1 is a required size for the compressed data, which are considered before coding for transmission error protection, as clearly recited in Claim 1.

Furthermore, Applicants submit that Fei et al. fails to show a step of determining the effective size of the compressed data according to this required size and to a coding characteristic. This is because, in the table referred to by the Examiner (section VI, Table 2), “the total number of bits (after source and channel coding) is kept to be approximately the same for each case” (see Fei et al, page 631, last paragraph, emphasis added). At most, Fei et al. discusses determining the size of the compressed data depending on the channel code rate so that the size of data coded for transmission error protection remains approximately constant. This is why Fei et al. fails to teach or suggest determining the effective size of the compressed data according to the required size for the compressed data before transmission error protection coding.

Nothing in Fei et al. teaches or suggest determining an effective size of the compressed data according to the required size and the at least one characteristic, as recited in Claim 1.

Liang et al., as understood by Applicants, relates to lossy compression of data with output file size control. However, nothing has been found in that patent that would remedy the deficiencies of Fei et al. discussed above.

Applicants have found nothing in Fei et al. or Liang et al., either separately or in any permissible combination (if any) that would teach or suggest determining an effective size of the compressed data according to the required size and the at least one characteristic, as recited in Claim 1.

For at least these reasons, Claim 1 is seen to be clearly allowable over Fei et al. and Liang et al., either separately or in any permissible combination (if any).

Independent Claims 2, 14, and 15 each include certain features which are similar to those discussed above in connection with Claim 1. Accordingly, Claims 2, 14, and 15 are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Leonard P. Diana", written over a horizontal line.

Leonard P. Diana
Attorney for Applicants
Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200